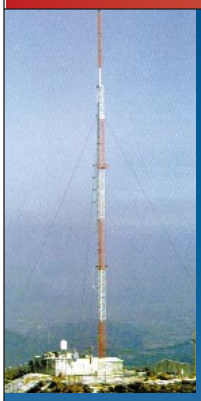


Broadcast

BROADCAST

Summary

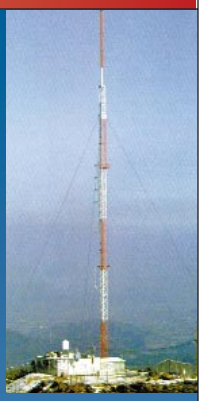
- Large, medium and small broadcasters are largely aware of the Y2K problem and are taking steps to ameliorate or eliminate its impact on broadcasting.
- Work is not yet complete and a significant amount of system integration and testing, in particular, remains to be done.
- Given the number of TV and radio stations available to most individuals, and the steps that broadcasters are taking, the public is at low risk of being without radio and TV broadcasts as a source of information.

INTRODUCTION

Virtually the entire population relies on radio and television for news, entertainment, and emergency information. Networks originate a good deal of television programming, which they typically distribute via satellite (see International Section, page 81) to their "affiliated" stations across the country, most of which they do not own. Individual stations also originate programming, whether or not they are affiliated with a national network, and buy programs from syndicators, who sell to individual stations and station groups. Some group owners that are not networks own large numbers of stations affiliated with various networks. As a result of their historical role of providing immediate information to the American people, and the fact that they are ubiquitous and can be received over-the-air for free, broadcast stations play a critical role in providing real-time information on problems, issues and emergencies. Of particular importance, broadcast stations participate in the Emergency Alert System, which brings national, state and local emergency messages to the public (see Emergency Services Section, page 90).

Accordingly, the Commission surveyed a representative sample of broadcast stations to determine their readiness to provide continuous service to the public. It is useful to note that, whereas most people have a limited number of communications links available, they have access to a multitude of broadcast stations. The American public is served by 1600 full power and 2100 low power television stations, augmented by 5000 "translator" (fill-in) stations and by 12,500 radio stations, with 3200 translators and boosters. The average household receives 13 television channels over the air. In the smallest markets, there are an average of four television and over eight radio channels available. This high level of redundancy means that in the event of individual station failures, the public would still be able to obtain information from alternative stations.

The National Association of Broadcasters (NAB), the industry's major national umbrella trade organization, has also been active in the Y2K sphere. It has put together several informational and educational initiatives as a resource for broadcaster efforts in Y2K compliance assessment, testing and remediation. The Association maintains an active website <www.nab.org/y2k/> that features original content and links to relevant sites around the web. Additionally, the NAB features Y2K sessions at its major industry meetings and conferences including at its last radio conference (October 14-17, 1998) and its next national convention (April 17-22, 1999). The national convention will feature a Y2K "Supersession" with FCC Commissioner Michael Powell as the keynote speaker. The Association has also participated in a number of state broadcasting association conference programs and NAB State Leadership Conferences to talk about Y2K issues in further support of its outreach efforts. Also, the Association of Local Television Stations has included in its



newsletters advice about the extent of potential problems and the need to not rely exclusively on vendors' assessments, as well as information regarding the FCC's and the NAB's Y2K websites.

Assessment

Methodology

The Commission contacted 230 broadcast licensees, owning among them in excess of 2600 stations, requesting that they complete the assessment questionnaire. The sample was designed to obtain responses from a cross-section of broadcast licensees. Both commercial and noncommercial radio and television stations were sent questionnaires.

The Mass Media Bureau first divided licensees into two categories — radio and television. Then it created four groups in each category. Each category had a "Large Group" consisting of all of the licensees listed in *Broadcasting and Cable Magazine*'s "Top 25," the top 20 licensees in terms of the number of stations, and the top 20 in terms of revenue. Each category also had a "Small Group" consisting of licensees having from 2 to 10 stations and an "Individual Group" consisting of licensees having a single station. Finally, each category had a "Noncommercial Group" consisting of licensees of noncommercial educational stations. Two-hundred and three licensees responded for a response rate of over 88 percent. The respondents were roughly equally divided among the categories.

Survey Results

For those licensees responding that they had a formalized process for addressing Y2K (representing 53 percent of stations covered by the survey), 50 percent estimated that they will have completed remediation and unit testing of their broadcast elements and their auxiliary systems by the end of March 1999. Seventy-three percent will be completed with these phases by June 1999, and 93 percent by September 1999, with the remainder concluding in October and November 1999. See Figure 1.

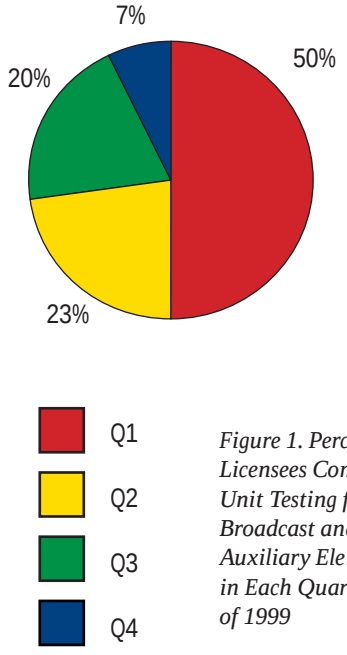
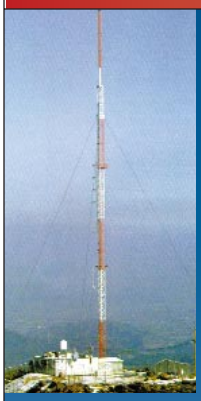


Figure 1. Percent Licensees Completing Unit Testing for Broadcast and Auxiliary Elements in Each Quarter of 1999

In order to better understand each way that our survey measured preparedness, the following discussion reviews the readiness of the industry by category, and further analyzes the data by size of the broadcasting entity.

Broadcast Elements

Broadcast elements consist of all parts of the radio or television station's transmission system. These include the studio and the antenna, and encompass, for example, cameras, CD and tape cartridge machines, control boards, and studio-transmitter



Broadcast

links. The data submitted indicate the responding licensees are on average 88 percent complete with the inventory phase and 82 percent complete with the assessment phase for broadcast elements (see Figure 2). However, responding broadcasters are only 56 percent complete with the remediation phase, 53 percent complete for unit testing, and 43 percent complete for integration testing with respect to these elements. However, the average expected completion date for remediation, unit testing, and integrated testing is April 1999. Responding broadcasters are on average 33 percent complete with roll out for broadcast elements. Larger licensees, which typically would be those most likely to engage in the rollout phase are, are on average 41 percent complete with this phase with an average expected completion date is April 1999. See Figure 3 for complete data on phase completion dates.

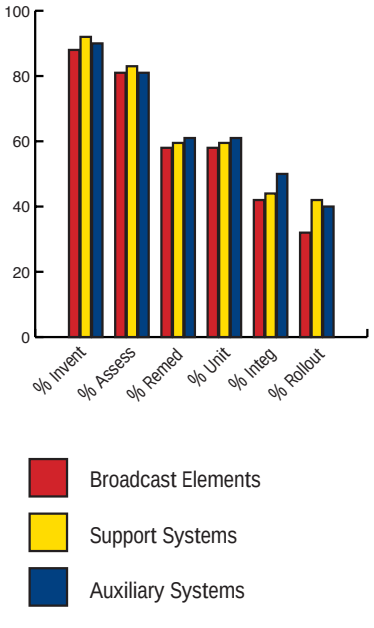


Figure 2. Percentage Complete — All Licensees

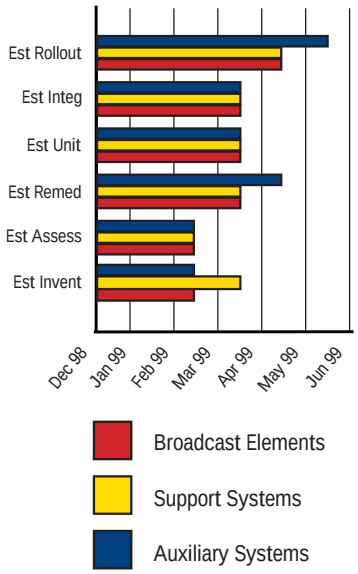


Figure 3. Estimated Completion Date — All Licensees

The survey responses were further broken down into three groups based on the number of licenses held by the licensee: small (1-2 licenses), medium (3-19 licenses), and large (20 or more licenses). With respect to broadcast elements, the large and small firms appear to be at similar stages of the process. Medium firms match the other groups for the first two phases—inventory and assessment—but are not as far along with respect to the other four phases (i.e., remediation, unit testing, integrated testing, and rollout). Complete data can be found in Figures 4, 5, and 6.

Broadcast elements have a direct and fundamental effect on the ability of the station to remain on the air and to provide news and emergency information to the public. If a station's transmitter fails, that station will not be able to broadcast. Fortunately, transmitters are essentially "dumb" devices that do not directly rely on computers for operation or control. Additionally, virtually all television stations and the vast majority of radio stations employ back-up transmitters.

There is an incidental concern related to antennas, and that is the safety lighting of their towers. If their lighting systems fail, antenna towers present a hazard to air navigation. This issue is fully discussed in the Tower Lighting Section. See page 100.

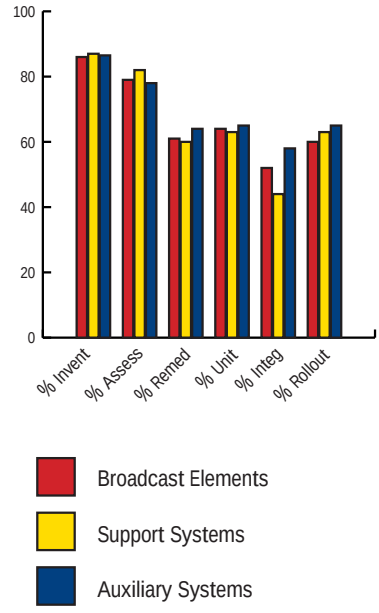


Figure 4. Percentage Complete — Small Licensees

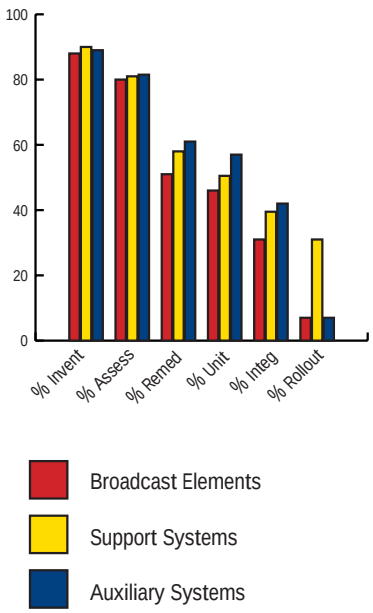
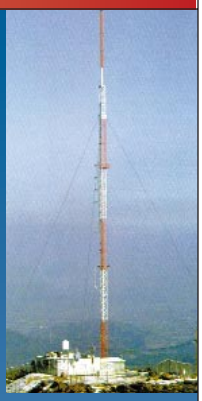


Figure 5. Percentage Complete — Medium Licensees



Support Systems

Support systems for broadcasters include station operation and control, support, maintenance, billing, and parts ordering. Many of these may be computer-related or controlled. The data submitted indicate that, with respect to support systems, responding stations are 92 percent complete with inventory, 86 percent complete with assessment, 59 percent complete with remediation, 58 percent complete with testing, only 46 percent complete with integrated testing, and 44 percent complete with rollout. See Figures 2 and 3. The average expected completion dates range from March 1999 for assessment through June 1999 for rollout. When broken down by the size of the licensee, the medium group again trails the other two groups in the final four phases. See Figures 7, 8, and 9.

Support systems are important to broadcasters. For example, traffic/program scheduling and billing functions may utilize date-sensitive computers. Should computers fail that have a trafficking or program scheduling function, programming and advertisements may not be inserted or, if inserted, may be broadcast at incorrect times. Network feeds or scheduled entertainment (e.g., music rotation scheduled by computer) may be missed or disrupted. In the long term, failure of billing systems may jeopardize receipt of station revenue threatening a station's ability to pay its employees,

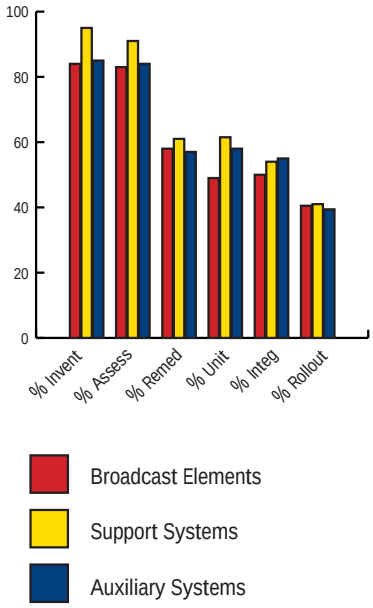
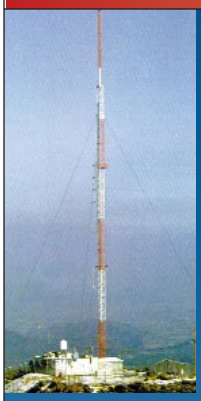


Figure 6. Percentage Complete — Large Licensees



Broadcast

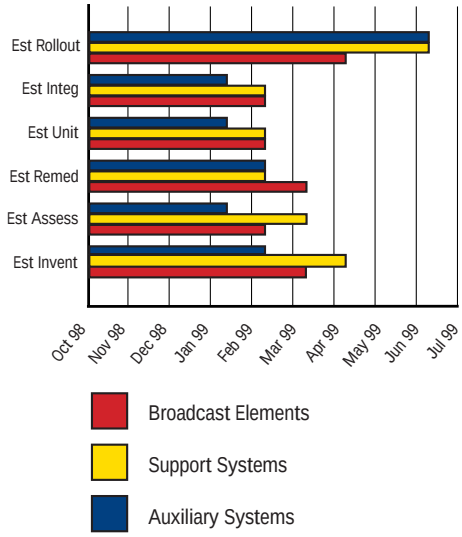


Figure 7. Estimated Completion Date — Small Licensees

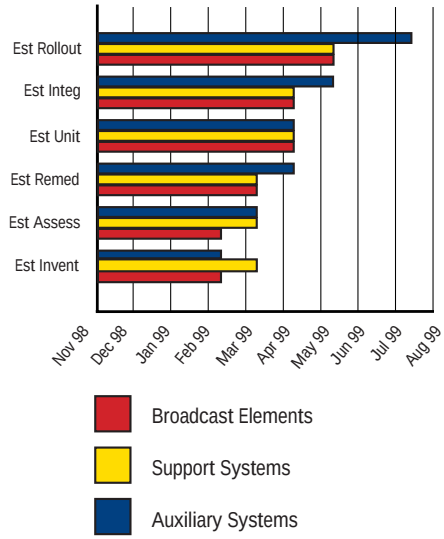


Figure 8. Estimated Completion Date — Medium Licensees

vendors and suppliers. Also, many broadcast stations, both radio and television, utilize satellite delivered programming which, in turn, is affected by proper computer functioning. If Y2K disrupts the programming input path, such as by causing a satellite to cease operation, it can deprive the station of its general programming schedule. To the extent that maintenance and parts are scheduled or ordered with the use of computers, Y2K induced failures could result in maintenance not being performed and parts not being ordered, potentially jeopardizing a station's ability to operate over the longer term.

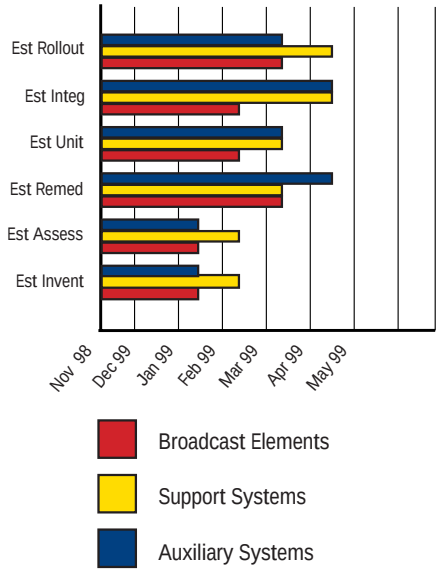
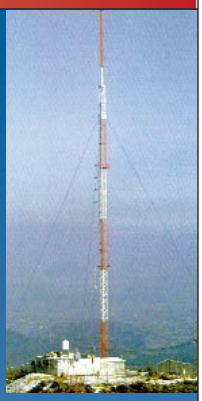


Figure 9. Estimated Completion Date — Large Licensees

Any support system failure could have a significant effect on station operations of a short- or long-term nature. Fortunately, many of these functions can be easily overridden or performed manually. Satellite delivered programming can be replaced by the same programming switched to working satellites, other programming delivered by functioning satellites, taped programming or live local talent; traffic and program schedules can be done by hand, as can be billing and bill payment. Thus, the level of risk is mitigated by the ability to employ alternative systems.



Auxiliary Systems

Auxiliary systems include payroll, human resources, backup (including auxiliary power supplies), security, and environmental control (including heating, ventilation, and cooling). The responding broadcasters indicate that they are 90 percent complete with the inventory phase for auxiliary systems and 82 percent complete with assessment. Remediation is, again, on average 62 percent complete with an average completion date of May 1999. Unit testing, however, is only on average 61 percent complete, with an average completion date of April 1999. Finally, integration testing is only on average 51 percent complete with an average expected completion date of April 1999. See Figures 2 and 3. When broken down by group, medium-size licensees lag the other two only in the final two phases of auxiliary systems, integration and rollout.

Failure of these systems can have a profound effect. For example, a failure of a station's environmental control system can allow heat buildup at the transmitter site leading to transmitter failure. Y2K induced problems with security systems can lock essential personnel out of the station's facilities. Accordingly, broadcasters must pay attention to these systems every bit as much as they do to systems that appear to have a more direct connection to broadcasting.

Contingency Planning

The data received indicates that responding broadcasters were on average 72 percent complete with their evaluation of the probability of failure of broadcast elements with an average completion date of March 1999. See Figures 10 and 11. Responding broadcasters were on average 73 percent complete with failure assessment of their support systems and 74 percent complete with respect to auxiliary systems. Failure assessment for electrical power is 67 percent complete and 62 percent complete for

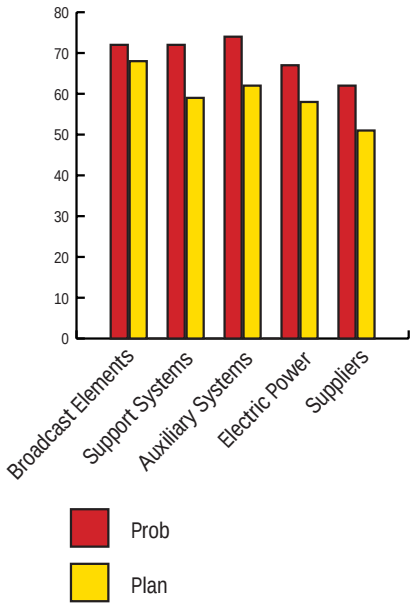


Figure 10. Contingency Planning Completion Rate — All Licensees

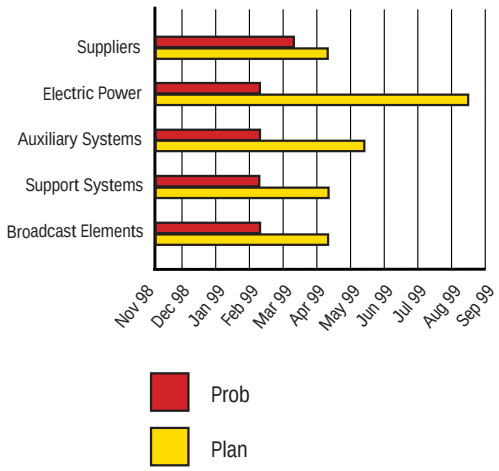
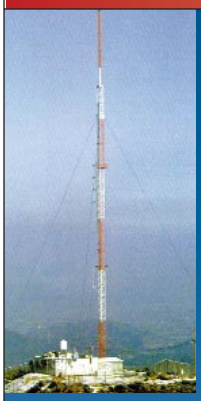


Figure 11. Contingency Planning Estimated Completion Date — All Licensees



Broadcast

suppliers. The average expected completion dates for these evaluations are March and April 1999, respectively. See Figure 11.

Respondents were on average 68 percent complete with contingency plans for broadcast elements with an average expected completion date of May 1999. Contingency planning with respect to support systems is, on the average, 60 percent complete; as to auxiliary systems it is, on average, 62 percent complete and the average completion date of contingency planning for support and auxiliary systems are May and June 1999, respectively. While contingency plans are only 59 percent complete with regard to electrical power, completion of this planning is expected to be completed by an average date of September 1999. Finally, contingency planning with respect to other suppliers is, on average, only 51 percent complete. See Figures 10 and 11.

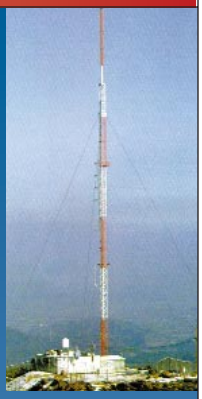
Conclusions and Remaining Concerns

Although individual station failures should not harm the public's ability to access information, we remain concerned with the present rate of remediation and that some individual broadcasters may not be adequately preparing for Y2K in time. We are attentive to the possible significance of the non-responses to our assessment and the readiness of those broadcasters. Accordingly, we are following up individually in order to elicit information from them, and will take additional steps as necessary to determine their Y2K readiness.

We are mindful that broadcast stations may suffer from Y2K incidents completely out of their control. We note that at our Emergency Preparedness Forum held November 16, 1998, broadcasters themselves recommended that stations have personnel present at the station over New Years Eve to guard against this and other eventualities.

We are also aware that in the smallest of markets, if local conditions prevent local stations from broadcasting, residents may only have access to broadcast signals originating from stations in neighboring communities. One prudent contingency plan is for these stations to be prepared to cover conditions particular to the community where broadcast service has failed.

It appears from data from the responding broadcasters that they are making progress toward Y2K readiness. We remain concerned, however, about those broadcasters that have failed to respond and have failed to adopt a formal remediation plan. Although we are encouraged that these broadcasters indicate that they are in contact with their vendors regarding the Y2K readiness of their equipment and generally show awareness regarding Y2K, it is difficult to judge how far along they are in the process, or when they are likely to be finished. We also are concerned about the ability of even the smallest broadcaster to adequately address Y2K without a step-by-step plan that ensures that every critical system has been reviewed. Even with these concerns, we recognize that the public's possible loss of service from an individual broadcaster due to its lack of Y2K readiness will be mitigated by the large number broadcast signals available to most citizens.



Broadcast

Consumer Tips

- Radio and TV are important sources of information about news, weather, and emergency situations. Consider having a battery operated radio or TV along with sufficient batteries.
- If a station suffers technical difficulties, consider tuning to another station for information, preferably one that broadcasts from your local area.
- If you use your VCR tuner to change stations on your TV set, know how to bypass the VCR in case it has technical problems.
- Have a television antenna handy for the reception of over-the-air television signals in the event that your cable system has difficulties.